

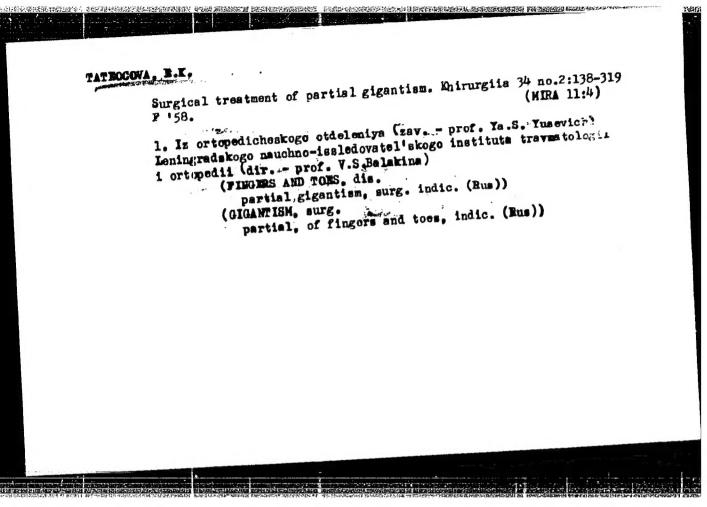
# TATEOSOVA, E.K. (Leningrad)

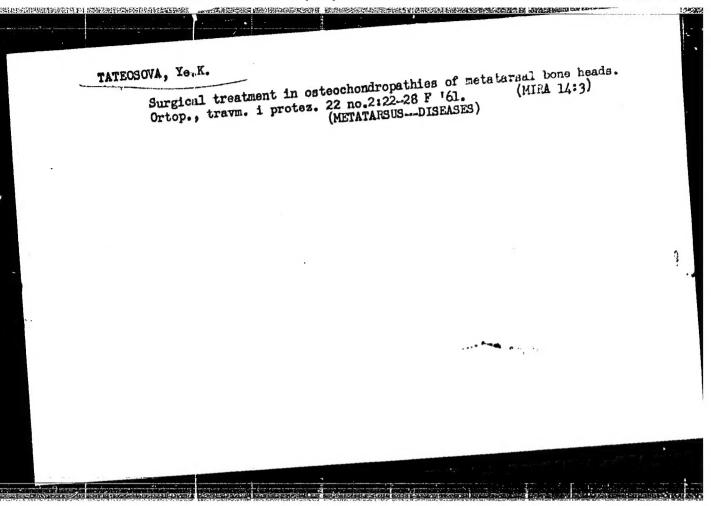
Dynamics of modifications of a fragment of tissue implanted under Dynamics of modifications of a fragment of timbur large. Arkh. pat., the skin during Filatov-Humiantsev's transplantation. Arkh. pat., (MLRA 6:12) 15 no.5:79-81 8-0 '53.

1. Iz patologoanatomicheskogo otdeleniya (saveduyushchiy - professor P.V.Sipovskiy) Gosudarstvennogo travmatologicheskogo instituta im. (Spleen-Transplantation) (Testicle-Transplantation) R. R. Vredena.

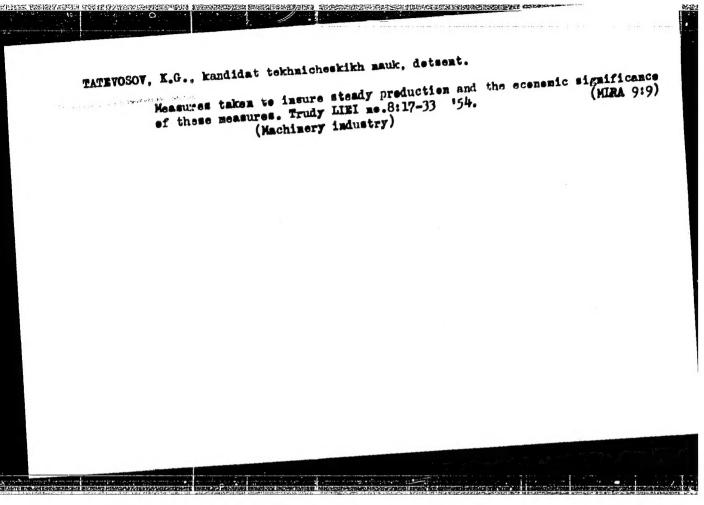
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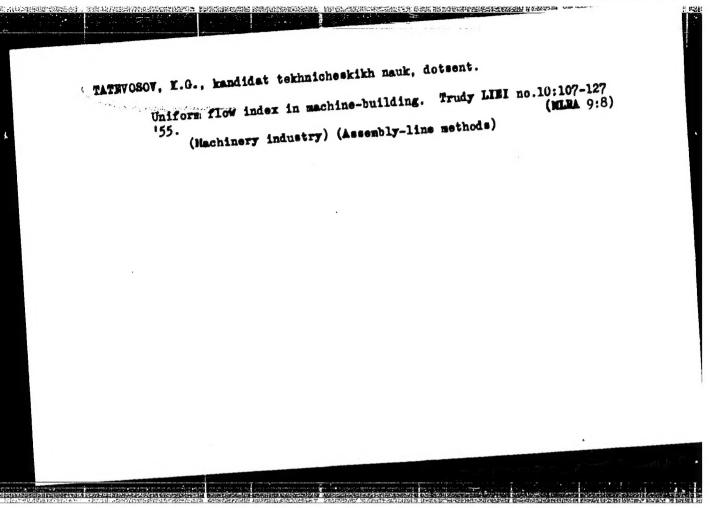
# TATEOSOVA, E.K. Subtrochanteric osteotomy as a method for correction of a defective position of the hip. Trudy Len.gos.nauch.-issl.inst. (MIRA 13:6) travm.i ortop. no.7:170-176 \*58. 1. Iz ortopedicheskogo otdeleniya Leningradskogo gosudarstvennogo nauchno-issledovatel'skogo instituta travmatologii i ortopedii. (OSTEOTOMI) (HIP JOINT--ABNOEMITIES AND DEFORMITIES)





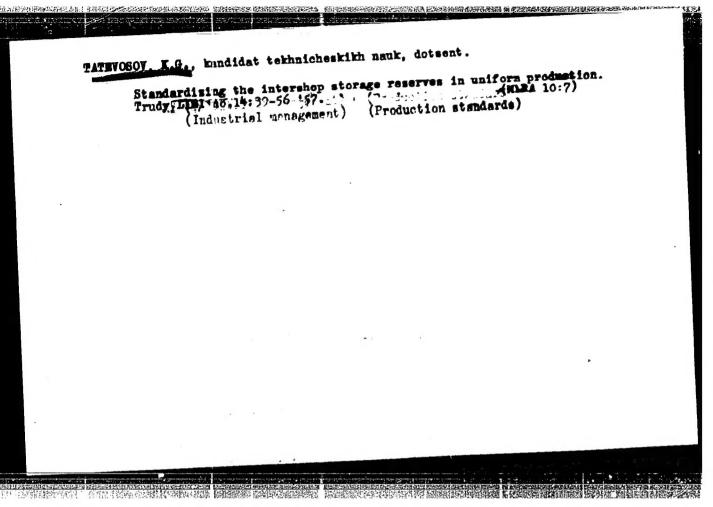
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TATEVOSOV, K.G.; LIPKIND, L.M.; PETROV, V.A.; ZEYDA, H.I.; SLIZHIS, M.U., nauchny, Fedaktor; BORSHCHEVSKAYA, S.I., redaktor; RODCHEMEO, H.I., tekhnicheskiy redaktor

[Smoothly organised work in a machine manufacturing plant; collaboration of the V.M.Molotov Institute of Engineering and Economics in Leningrad with the "Pnevmatika" plant] Organisatsiia ritmichnoi raboty mashinostroitel'nogo savoda; iz opyta sodrushestva Leningradskogo inshenerno-ekonomicheskogo instituta imeni V.M.Molotova savodom "Pnevmatika" [Leningrad] Lenisdat, 1956. 175 p. (MLRA 10:7) (lifficiency, Industrial)



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25(5) P. PHASE I BOCK EXPLOITATION SOV/1392

Leningrad. Inzhenerno-ekonomicheskiy institut

- Organizatsiya i planirovaniye ravnomernoy raboty mashinostroitel'nykh predpriyatiy; Mezhvuzovskoye soveshchaniye. Doklady (Organization and Planning of Uniform Work in Machine-building Enterprises; Conference of Vuxes. Reports) Moscow, Mashgis, 1958. 100 (Series: Its: Trudy, vyp.22) 4,000 copies printed.
- Eds.: S.A. Volkov, and E.G. Tatevosov.; Tech. Ed.: L.V. Sokolova; Managing Ed. for Literature on Michine-building Technology (Mashgiz): Ye.P. Naumov, Engineer.
- PURPOSE: This collection of articles is intended for engineering and technical personnel in machine-building establishments, and for scientific workers and students of institutes and departments of engineering and economics.
- COVERAGE: This collection of articles contains reports by workers from wizes, scientific research institutes, and industrial establishments presented at the conference of vizes on the subject: "Organization and Planning of Uniform Operations in Machine-building Establishments." These reports discuss general problems encountered in organization, analysis, and theory of uniform production, as well as problems in schedule planning, technical preparation, and production specialization.

Card 1/8

80V/1392 Organization and Planning of Uniform TABLE OF CONTENTS: 3 Introduction Satel', E.A., Professor, Doctor of Technical Sciences (Moskovskiy inzheneroekonomicheskiy institut imeni Ordzhonikidze [ Moscow Institute of Engineering and Economics imeni Ordzhonikidze]). Planning of Technical Progress in Machine Building as a Prerequisite for Correct Organization of "Rhythmic" [Balanced] 18 Production Tatevosov, K.G., Docent, Candidate of Technical Sciences (Leningradskiy inzhenerno-ekonomicheskiy institut [Leningrad Institute of Engineering and Economics]). Studies Under the Auspices of the Department of Organization and Planning at the Leningrad Institute of Engineering and Economics in the Field of the Uniformity of Production in Machine-building Plants Ganshtak, V.I., Docent, Candidate of Economic Sciences, and I.A. Rozenberg, Docent, Candidate of Economic Sciences (Ural'skiy Politekhnicheskiy Institut imeni Kirova [Ural Polytechnic Institute imeni Kirov]). Some Problems in the Practice of Organizing Rhythmic Operations in the Machine-building Plants 51 of the Urals **Card** 2/8

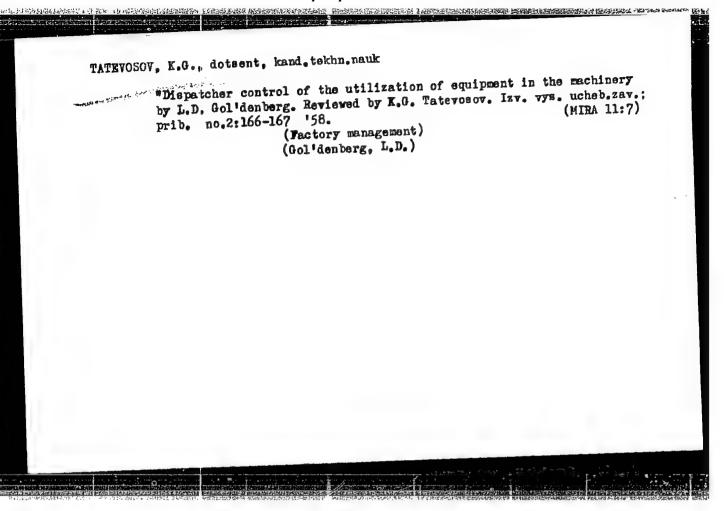
Organization and Planning of Uniform (Cont.)	80V/139 <sup>2</sup>
rirsov, V.G., Engineer (Leningradskiy Kirovski grad]). Practices in Flanning Enythmic Pro	y zavod) [Kirov Plant in Lenin- oduction at the Kirov Plant 59
Climov, A.N., Docent, Candidate of Technical ; Docent, Candidate of Technical Sciences (Leinstitut imeni Kalinina [Leningrad Polytech Indices of Rhythmic Work and Uniformity in Building	nnic Institute imeni Kalinin]). Product Output in Lot Machine 69
Kantov, N.N., Engineer (Gor'kovskiy Politekhn technical Institute]). Introduction of a Regulating Lot Production in Establishment	
Melidov, I.Ye., Doesnt, Candidate of Technical icheskiy institut [Moscow Power Engineering Phythm and Utilization of Productive Capaca Specializing in Individual and Small Lot For Power Machinery-manufacturing Plants)	1 Sciences (Moskovskiy energet- g Institute)). Production ity in Machine-building Plants
Docent, Candidate of Economic Docent, Candidate of Technical Sciences (I Card 3/8	Sciences, and V.A. Petrov, eningrad Institute of Engineering

Alibekova, A.M., Docent, Candidate of Economic Sciences (Azerbaydzhanskiy Industrial'nyy institut imeni Azizbekova [Azerbaijan Industrial Institute Industrial'nyy institut of Rhythmic Operation of an Establishment on	106 119
Slodkevich, N.I., Docent, Candidate of Economic Sciences (Moscow Institute of Engineering and Economics imeni Ordzhonikidze). Problems of Operational and Production Planning in Single Unit and Small Lot Machine Building  Alibekova, A.M., Docent, Candidate of Economic Sciences (Azerbaydzhanskiy Industrial 'nyy institut imeni Azizbekova [Azerbaijan Industrial Institute Industrial Azizbekova]) Effect of Enythmic Operation of an Establishment on	
of Engineering and Economics Imeni Ordenomics of Engineering and Production Planning in Single Unit and Small Lot Machine Building and Production Planning in Single Unit and Small Lot Machine Building Alibekova, A.M., Docent, Candidate of Economic Sciences (Azerbaydzhanskiy Industrial'nyy institut imeni Azizbekova [Azerbaijan Industrial Institute Industrial'nyy institut imeni Azizbekova Operation of an Establishment on	119
Industrial nyy institut imeni Azizbekova (Azerbaijan industrial nyy indu	
Production Costs	130
Veselkov, F.S., Candidate of Economic Sciences (Moskovskiy ekonomicheskiy institut [Moscow Economic Institute]). Role and Objective of Finances in the Struggle for Rhythmic Operation of Establishments	135
Dadashev, B.A., Economist (Azerbaydzhanskiy institut narodnogo khozyaystva imeni Karla Marksa [Azerbaijan Institut of National Economy imeni Karl Marx]). Rhythmic Organization of Production and Uniform Production Output in Plants Specializing in Series and Small Lot Production Based on the Example of Baku Plants Manufacturing Petroleum Equipment	144
Card 4/8	

Organization and Planning of Uniform (Cont.) 80V/1392	
Kolmakov, N.A., Engineer (Leningradskiy zavod poligraficheskikh mashin [Leningrad Polygraphic Equipment Plant]). Organizing Uniform Production and Output of Polygraphic Equipment	151
Dobronravov, I.N., Engineer (Ivanovskiy zavod tekstil'nogo mashinostroy- eniya [Ivanovo Textile Machine-building Plant]). Organization of Uniform Operations at the "Ivtekmash" Plant	156
Kats, A.S., Docent, Candidate of Economic Sciences (Leningrad Institute of Engineering and Economics). Planning Technical Preparation as a Factor of Improved Uniformity in Production	175
Lyubavskiy, V.I., Docent, Candidate of Technical Sciences (Leningrad Institute of Engineering and Economics). Planning Rhythmic Processes of Machining Parts in Lot Production	188
Mashistov, A.I., Candidate of Economic Sciences (Leningrad Institute of Engineering and Economics). Methodology Used in Establishing Consolidated Standards for Labor Content Going Into Production of a Die (Based on the example of plants in the Instrument-manufacturing Branch)	205
Card 5/8	

Organization and Planning of Uniform (Cont.	sov/1392
Folstykh, A.S., Docent, Candidate of Economi institut narodnogo khozyaystva imeni Plek National Economy imeni Plekhanov]). Plan National Economy imeni Plekhanov (Operational Assuring Rhythmic Operations)	c Sciences. (Moskovakly channes (Moscow Institut of ming the Length of the Production tion of an Establishment 217
Sokolitsyn, S.A., Docent, Candidate of Technical Sciences (Leningrandidate of Technical Sciences (Leningrandidate). Nathods of Setting up Banks in	nicri Sciences, and A. N. Killsov, ad Polytechnical Institut imeni n Lot Production 225
German, B.A., Engineer. Calculating Schedu	le Planning Standards on the anufacturing Plant
Al'perovich, A.M., Engineer (Vsesoyuznyy ns strumental'ayy institut [All-Union Scient Tools]). Effect of Banks and Their Make	uchno-issledovatel'skiy in-
Production  Petrov, V.A., Docent, Candidate of Technical of Engineering and Economics). Methodology organizing and Planning Uniform Operation	al Sciences (Leningrad Institute logy in Classifying Product in on of an Establishment 250
Card 6/8	

Organization and Planning of Uniform (Cont.) SOV/1392	
Force Shops as a Factor in Assuring My what operation	318
Kats, A. S., Docent, Candidate of Economic Sciences (L'ningrad Institute of Engineering and Economics). The Most Important Indices of Forge Shop	326
Gol'bin, Ya.K., K.I. Nevel'skaya and B.V. Pashkevich, Candidates of Beda- omic Sciences (Institut ekonomiki Akademii nauk BSSR [Institute of Economics of the Academy of Sciences of the BSSR]). Rhythmic Operation as the Nost Important Condition for Transition to New Operating Con-	33 <sup>2</sup>
ditions Kantorovich, L.V., Professor, Doctor of Physical and Mathematical Sciences (Leningradskoye otdeleniye Matematicheskogo instituta AN SSSR [Leningrad Branch of the Mathematics Institute of the AS USSR]). Possibilities of Applying Mathematical Methods in Production-planning Problems	338
Ivanov, A.A., Candidate of Physical and Mathematical Sciences (Leningrad Branch of the Mathematics Institute of the AS USSR). Mathematical Analysis of Some Problems in the Operational Planning of Production	35 <sup>4</sup>
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TATEVOSOV, K.(h., prof., red.; SUVOROV, I.V., red.; VODOLAGINA, S.D., tekhn. red.

[Fundamentals of the organization of a socialist machinery plant;] Osnovy organizatsii sotsialisticheskogo mashinostroitel nogo predpriiatiia. Pod red. K.G.Tatevosova. Leningrad, Izd-vo Leningr. univ., 1961. 131 p. (MIRA 15:2)

1. Leningrad. Leningradskiy inzhenerno-ekonomicheskiy institut.
(Machinery industry)

PETROV, Vladimir Arsent'yevich; KOIMAKOV, Nikolay Alekseyevich; EPEL'MAN, Gilel' Grigor'yevich. Prinimali uchastiye: NIKITIN, V.V.; MOROZOV, I.I.; SIVOKHA, N.V.; UTROBINA, N.I.; NIKITINA, N.N.; PANKOV, N.H.; BAUSHEV, N.P.; TATEVOSOV, K.G., dots.; LIPKIND, L.M.; LEBEDEVA, A.K., inzh.-ekon.; VIL'DAVSKIY, I.M., dots., retsenzent; VOLKOV, S.A., kand. ekon. nauk, dots., red.; CHFAS, M.A., red. izd-va; PETERSON, M.M., tekhn. red.

[Continuous conveyer methods used in the lot production of composite machines] Potochno-konveiernye metody v seriino m proizvodstve slozhnykh mashin; iz opyta Leningradskogo zavoda poligraficheskikh mashin. Moskva, Gos. nauchno-tekhm. izd-vo mashinostroit. lit-ry, 1961. 130 p. (MIRA 14:9)

1. Rabotniki Leningradskogo zavoda poligraficheskikh mashin(for Nikitin, Morozov, Sivokha, Utrobina, Nikitina, Pankov, Baushev). 2. Leningradskiy inzhenerno-ekonomicheskiy institut (for Tatevosov, Lipkind, Lebedeva).

(Leningrad--Printing machinery and supplies)
(Factory management)

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TATEVOSOV, Konstantin Georgiyevich; SOKOLITSYN, S.A., kand. tekhn. nauk, dots., retsenzent; KLIMOV, A.N., kand. tekhn. nauk, dots., retsenzent; VARKOVETSKAYA, A.I., red. izd-va; SPERANSKAYA, O.V., tekhn. red.

[Establishment of norms for a uniform production flow in seriesmanufacture of machinery] Normativnye raschety ravnomernogo proizvodstva v seriinom mashinostroenii. Moskva, Mashgiz, 1961.

246 p.

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(Machinery industry—Production standards)

TATEVOSOV, K.G., doktor ekonom.nguk,prof.; SHEYNMAN, R.P., inzh.

Establishing an optimum schedule and volume plan for a shop (section) with diversified production. Vest.mashinostr. 44 no.7: 72-77 Jl '64. (MIRA 17:9)

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TATEVOSOV, K.G.; VLASOV, B.V., doktor ekon. nauk, prof., retsenzent

[Principles of operation and production planning in a machine:y-manufacturing enterprise] Osnovy operativno-proizvodstvennogo planirovaniia na mashinostroitel'nom predpriiatii. Moskva, Mashinostroenie, 1965. 375 p. (MIRA 18:5)

TATEVOSOV, S.R.	DECEASED	1962/3
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MEDICINE		

FOGUTINEY, 2.v., FOKSHA, V.G.; TATEVOSOV, S.R. (Yalta)

50th Anniversary of the I.M. Sechenov Institute of Medical
Climatology and Climatotherapy. Vop. kur., fizioter. 1 lech.
fiz. kul\*t. 30 no.1:90-92 Ja-F '65.

(MIRA 18:8)

TATEVOSOV, S.R.

Apropos N.I. Speranskii's article "Problem as to samatorium and health resort treatment of stenocardia." Vop. kur., fizictor. i lech. fiz. kul't. no.6:562-563 '63. (MIRA 17:8)

l. Iz Instituta klimatologii i klimatoterapii imeni I.M. Sechenova, Yalta.

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BOISHA, V., KARASEV, M.

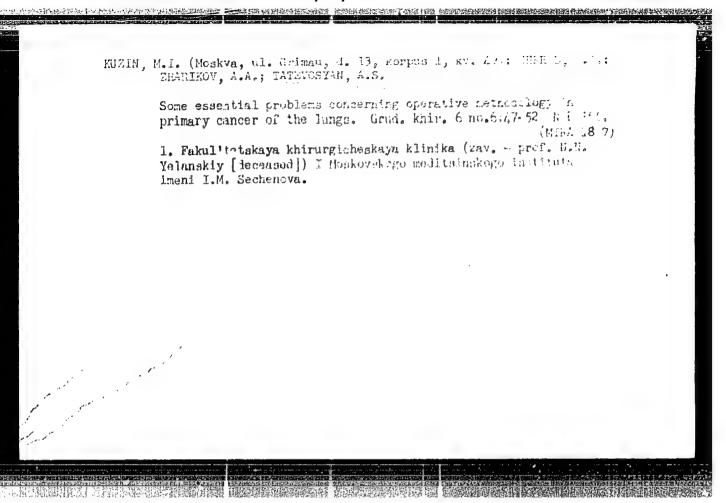
Georgii. Petrovich Jedorov; an obituary. Vrach. delo no.91999 8'58
(FEDOROV, GEORGII PETROVICH, 1900-1958) (MIRA 11:10)

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TATEVCSCVA, V. N.

Tatevosov, S. R., <u>Tatevosov, V. N.</u> and Samsonov, M. A. "The reaction of the cardiovascular system to mud treatment in certain cardiovascular diseases", Sbronik nauch. trudov kurorta Saki, Vol. IV, 1948, p. 133-42

So: U-3261, 10 April 1953 (Letopis 'Zhurnal 'nykh Statey, No. 12, 1949).



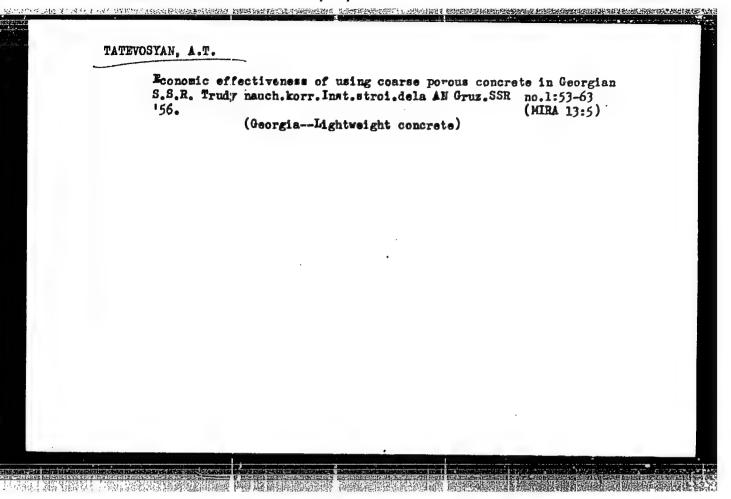
ATAMETOV, T.U.; BULIDOV, N.G., dotsent; DOLGUSHIN, A.G.; KASSIRSKIY, A.A.; LIMANOVSKIY, A.A., inzh.; NISENGAUZ, A.D.; TATEVOSYAN, A.S.

For a correct interpretation of the relation between gin capacity and the volume of ginning output. Tekst.prom. 20 no.3:32-35 Mr 160.

(MIRA 14:5)

1. Rukovcditel! laboratorii syr'ya TSentral'nogo nauchno-issledovatel'skogo instituta khlopkovoy promyshlennosti (for Ktametov). 2. Tashkentskiy institut inzhenerov irrigatsii i mekhanizatsii sel'skogo
khozyaystva (for Gulidov). 3. Glavnyy inzh. Tashkentskogo
khlopkozuvoda (for Dolgushin). 4. Rukovoditel' laboratorii ispytaniya
khlopka "Sentral'nogo nauchno-issledovatel'skogo instituta khlopkovoy
promyshlennosti (for Kassirskiy). 5. Glavnyy spetsialist nauchnotekhnicheskogo komiteta Soveta Ministrov UzSSR (for Nisengauz).
6. Nachal'nik Otdela khlopka Gosplana UzSSR (for Tatevosyan).

(Cotton gins and ginning)



TATE VOSYAN, A. T.

"Highly Porous Concrete in the Structural Production of the Georgian SSR." Cand Tech Sci, Tbilisi Inst of Railroad Transport Engineers imeni V. I. Lenin, Min Transportation, Tbilisi, 1954. (KL, No 9, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

TER-POGOSYAN, R.A.; TATEVOSYAN, A.V.

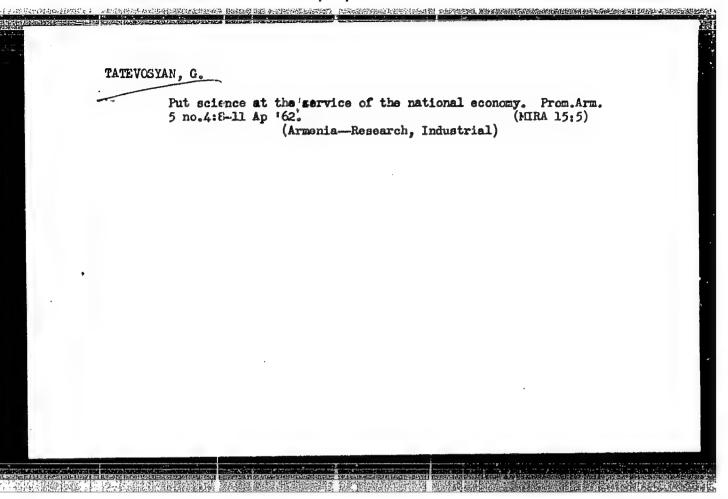
Induction of phage by lysogenic cultures of Escherichia coli by the use of X rays. Radiobiologiia 1 no.5:813-814 '61.

(MIRA 14:11)

1. Sektor radiobiologii AN Armyanskoy SSR, Institut epidemiologii i gigiyeny. Yereyan.

i gigiyeny, Yerevan.
(X RAYS—PHYSIOLOGICAL EFFECT) (BACTERIOPHAGE)

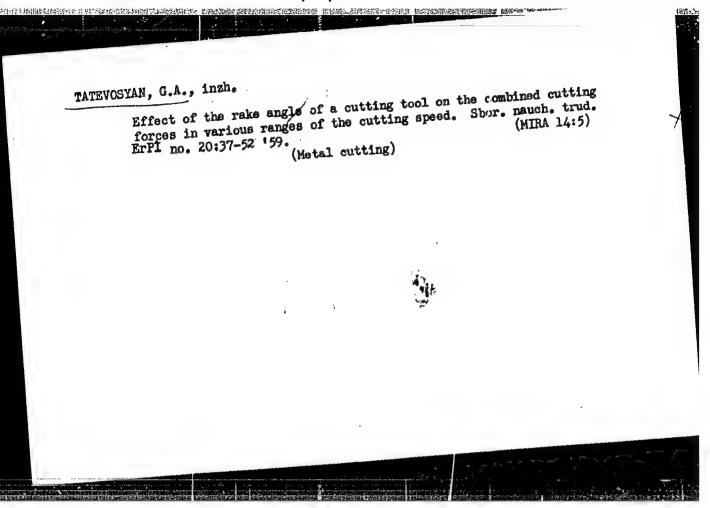
IAIE	At the Exhibition of Achievements of the National Economy of the U.S.S.R. Plastics in the machinery manufacture. Plast.massy no.2:1-4-162 (MIRA 15:2)
	(PlasticsExhibitions) (Machinery industry)



# TATEVOSYAN, G.

New stage in the development of the construction industry in Armenia. Prom.Arm. 6 no.2:3-6 F '63. (MIRA 16:5)

1. Zaveduyushchiy otdelom stroitel'stva i gorodskogo khozysystva. (Armenia—Construction industry)



TAILVOS

28-1-24/42

AUTHOR:

Losev, I.P., Professor', Doctor of Technical Sciences, Tatevos'yan,

G.O., Engineer

TITLE:

A Plastic Test Method (Metod ispytaniya plastikata)

PERIODICAL: Standartizatsiya, # 1, Jan-Feb 1957, p 69-71 (USSR)

ABSTRACT:

The article contains critical remarks to standard "FOCT 5960-51" for polychlorovinyl cable plastic (soon to be revised), concerning the test method prescribed, which consists of exposing two specimens to the light of two carbon arc lamps in an artificial-weather apparatus at 70  $\pm$  1 °C. After aging, the specimens must not be sticky and they must not crack when bent 180° at an air temperature of 20° J. The following critical statements are made: The duration of test (1000 hrs) is too long. The aging limit is determined by visible and feelable changes in . plastic, which results in a very considerable amount of errors. The nature of structural changes as a result of exposure is not revealed; the service life of arc lamp reflectors is unlimited, though residual structure changes take place in the glass under the influence of ultraviolet rays, and these changes affect the spectral composition of luminous energy. The test apparatus

Card 1/3

A Plastic Test Method

28-1-24/42

"MII -1-2" has defects of design, mainly temporary failures of one of the two light sources, causing unequal exposure of specimens. Description is given of a new apparatus "ANTICT -2-4-2", designed by the Research and Planning Institute for Plastics, for testing light resistance, thermic resultance, and aging of cable plastics in atmospheric and artificial conditions. This apparatus has two carbon are lamps and four mercury lamps "IIPK -2". About 384 specimens are tested simultaneously. The spectral composition and intensity of light is controllable in a sufficiently wide range. The service life of lamps is limited. The automatic system eliminates test errors as a result of light source failures. The processes taking place in plastics during aging were studied mainly on uncolored specimens of grades 230, 239, 251 and 489, in the described apparatus and under natural conditions, on stands in Moscow and Tbilisi. The basic physical and mechanical data were found. Placing specimens on paper (in the form of small showels) was avoided because the plasticizer migrated into the paper. It is stated that it is possible to inhibit some of the processes taking place in plastics and to intensify other processes by changing the spectral composition and intensity of luminous energy. The authors suggest the inclusion of the described apparatus and method into the revised

Card 2/3

A Plastic Test Method
standard.

AVAILABLE: Library of Congress
Card 3/3

TATEVOS'YAN, G. O., Cand Tech Sci -- (diss) "Study in the field of the aging of polyvinyl chloride masticated rubber under the effect of light energy." Mos, 1958. 24 pp (Min of Higher Education USSR, Mos Order of Lenin Chem-Technol Inst im D. I. Mendeleyev), 200 copies (KL, 15-58, 116)

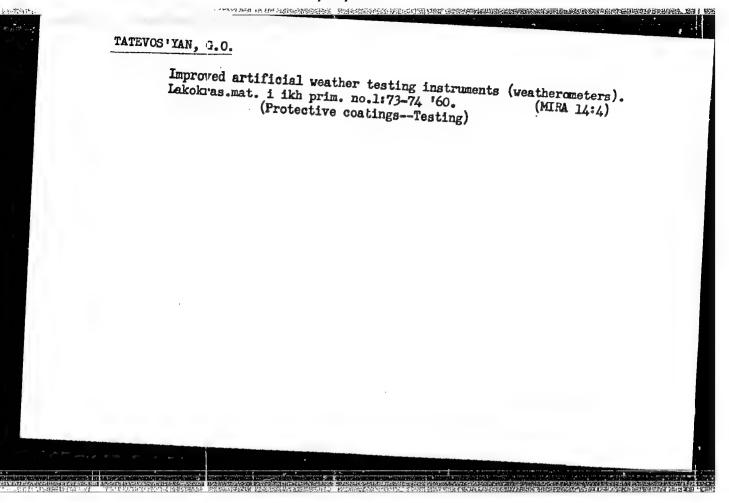
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TATEVOS'YAN, Georgiy Ovenesovich; KALININA, L.S., nauchayy red.;
BASHKOVICH: A:L:: ied.: RAKOV, S.I., tekhn.red.

[Plastics and their use in the national economy] Plastmassy i ikh primenenie v narodnom khoziaistve. Moskva. Vses.uchebno-pedagog.izd-vo Trudrezervizdat. 1959. 134 p. (MIRA 12:11) (Plastics)

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TATEVOS'YAN, G.O.

Soviet and foreign weatherometers and standards for them. Lakokras.

mat.i ikh prim. no.3:65-70 '60. (MIRA 14:4)

(Weathering) (Testing machines)

**3/191/60/000/006/001/01**5 **B004/B054** 

AUTHOR:

Tatevos'yan, G. O.

TITLE:

Plastics at the Exposition of Achievements of the USSR

National Economy

PERIODICAL:

Plasticheskiye massy, 1960, No. 6, p. 1

TEXT: In the showroom of plastics (pavilion of the chemical industry) at the Vystavka dostizheniy narodnogo khozyaystva SSR (Exposition of Achievements of the USSR National Economy), 1960, the Orekhovo-Zuyevskiy zavod "Karbolit" (Orekhovo-Zuyevo "Karbolit" Plant) demonstrates its development and technical equipment, production samples, and photographs of collaborators. On show are the automatic electronic control of hydraulic presses by means of electrically operated valves, the scheme of the first production line now being assembled in the USSR for rotational molding with dosage and pelleting of the molding material, heating by high-frequency current, molding and mechanical treatment; a new scheme for the production of "Voloknit"; for the production of molding powder by continuous milling of the mixture in a thin layer; a modernized

Card 1/3

Plastics at the Exposition of Achievements S/191/60/000/006/001/015 of the USSR National Economy B004/B054

machine for impregnating fabrics with automatic change of the fabric feed depending on the temperature, and two-sided application of the resin; further, a fully automatic boiler plant. Exhibits in the general showroom are: high- and low-pressure polypropylene and -polyethylene, and their products; the new polymers polyformaldehyde Spolycarbonate, 15 and pentene; polyethylene terephthalate and films made from it; foam polyurethane in various colors. Production by means of vacuum forming and pneumatic forming, as well as forming from concrete, are demonstrated. For the first time on show are organizational concistes on the basis of cold-setting furfurol acetone resin, bthe molding material AF-4 (AG-4) for building constructions, steel tubes lined with Viniplast and organic glass, polyamide water taps, and single-crystal scintillators. Other exhibits are block polystyrene in various colors and in bands ("Stirofleks") and threads for insulating electric cables, further the casting material MCH (MSN), band impact-resistant polystyrene in sheets. Further objects are Viniplast, Faolite, Textolite, glass Textolite with polyester resin, polyamides, epoxy resins and compounds, resin-bonded fiber boards, heat-conducting ATM-1 (ATM-1) molded material resistant to

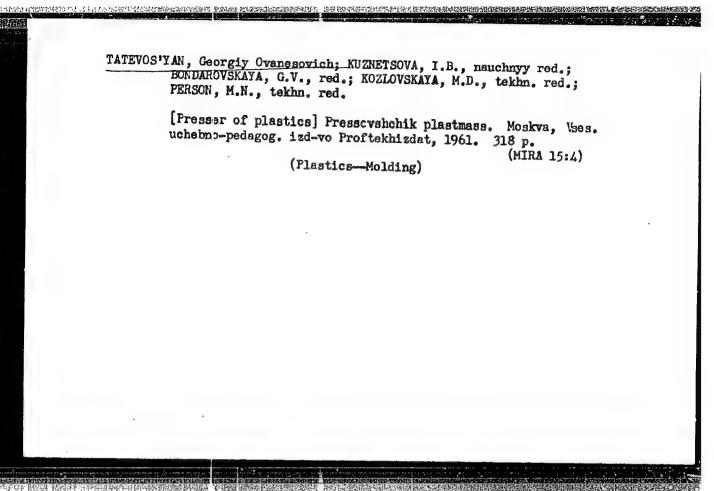
Card 2/3

Plastics at the Exposition of Achievements 5/191/60/000/006/001/015 of the USSR National Economy 8004/8054

aggressive agents, and plasticized polyvinyl chloride (Plastikat). Numerous diagrams show the development of production.

V

Card 3/3



**S/191/61/000/001/014/015 B101/B205** 

AUTHOR:

Tatevosyan, G. O.

TITLE:

At the Exposition of the Achievements of the Soviet National Economy. Plastics - substitutes for non-ferrous metals

PERIODICAL: Plasticheskiye massy, no. 1, 1961, 74-76

TEXT: A number of plastics, intended to replace non-ferrous metals, were on show at the Vystavka dostizheniy narodnogo khozyaystva SSSR (Exposition of the Achievements of the Soviet National Economy), including 1) Viniplast products: a welded adsorption column with pipe connections; a ventilator with a capacity of  $8240m^3/hr$ , which is highly resistant to aggressive gases; centrifugal pumps for aggressive liquids; tubes of different diameters; accumulator vessels and steel pipes lined with Viniplast; cable insulators made of plasticized Viniplast (plasticizers: dibutyl phthalate, trioresyl phosphate, etc.). 2) High- and low-pressure polyethylene. The following types of high-pressure polyethylene are mentioned:  $\Pi9-500$  (PE-500),  $\Pi9-450$  (PE-450),  $\Pi9-300$  (PE-300), and  $\Pi9-150$  (PE-150) (the numbers denote the elongation expressed in %). Other exhibits were hoses,

Card 1/2

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tubes up to 6 m long, tanks for aggressive liquids, and films 0.2-0.035 mm thick. The lining of chemical apparatus with polyethylene is mentioned. 3) Faolite, a product from phenol formaldehyde resin with fibrous asbestos as filler (graphite is added to several products), is resistant to concentrated and dilute inorganic and organic acids, chlorine, gaseous HCl, chlorohydrocarbons, and mineral oils. It is not able to withstand nitric acid, chromic acid, iodine, bromine, aniline oil, pyridine, alkalis, and alcohol. Tubes, valves, stopcocks, tanks for electrolysis and etching, sorption columns, centrifugal pumps, and a bubbling hood 3000 mm in diameter were on show. 4) Laminated plastics of the types textolite, Getinaks, and ACM (DSP) (a kind of hardwood) are made from phenyl-formal-dehyde resins, using paper, cotton, or wood fiber as fillers. Textolite and Getinaks boards, as well as textolite linings and pinions were shown. Linings are also made of DSP. There are 4 figures.

Card 2/2

S/191/61/000/002/012/012 B124/B204

AUTHOR:

Tatevos'yan, G. O.

TITLE:

On the exhibition of the achievements of political economy in the USSR. Plastics in the place of nonferrous metals

PERIODICAL:

Plasticheskiye massy, no. 2, 1961, 76-79

TEXT: Industry in the USSR manufactures the following structural polyamide plastics: Nylon-type N -68 (P-68), N -6 (P-6), AK-7 (AK-7), and polycaprolactam. All these polyamides display high strength, high resistance to wear, low coefficient of friction, good adhesion on metals, weldability, and resistance to many organic solvents, but they also display a certain degree of water absorption. Due to their low coefficient of friction they are used instead of bronze in the production of casings and linings for bearings. A higher heat conductivity may be attained by addition of powdered copper, graphite, and other heat conducting substances (10-15%). Blades of centrifugal pumps for corrosive liquids etc. are produced from polyamide resins by casting under pressure. Polyurethane resin NY-1 (PU-1)

Card 1/3

On the exhibition of the ...

S/191/61/000/002/012/012 B124/B204

is distinguished by its high resistance to diluted mineral acids, dilute and concentrated organic acids, lyes, hydrocarbons, aldehydes, ketones, fats, mineral and organic oils, and to moisture at 100-110°C. ATM-1 (ATM-1)-type antegmite is a chemically stable heat conductive plastic on a phenol-formaldehyde base with graphite filler. This plastic is also electrically conductive, antifrictional, and self-lubricating. Therefore it is chiefly used for the production to devices and pipings operating at low pressure. It may be pressed in hot pressmolds without any additional impregnation or thermal treatment. Moreover, it serves the production of heat exchangers that are resistant to corrosive media, for stopcocks, centrifugal pumps, and as lining in chemical device. Its linear thermal expansion coefficient is similar to that of steel. Because of its antifrictional properties it is used in the production of casings and inserts of bearings which need not be lubricated. It is manufactured in the shape of pressed powder, lining slabs, and tubes. The pressed materials  $\{A \cap (FAG)\}$ are prepared on the basis of phenol formaldehyde resins with graphite filler; they are distinct by an enhanced impact strength and a somewhat

Card 2/3

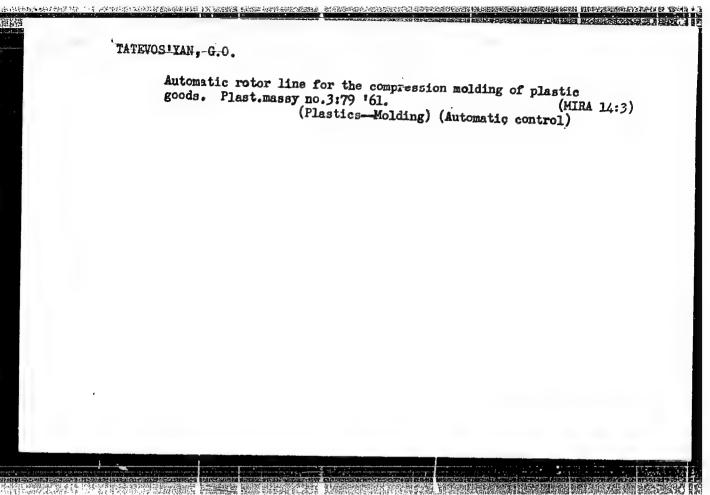
On the exhibition of the...

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higher heat resistance; the products may be cold-pressed and then hardened by introduction of a hardener. Phenol formaldehyde resins modified either by polyvinyl chloride (forming plastics known as "Phenolites" and "Decorrosites") or by natural rubbers, which leads to  $\Phi$ KN(FKP)-type products. The pressed powders of the first type are known as Phenolite (1,2,3,4 T (4T),5,PT(RT),PCT(RST)), Decorrosite, and Antifrik. The introduction of PVC reduces water absorption, increases resistance to water and acids, and slightly improves the physical and mechanical and the dielectric characteristic numbers. Introduction of natural rubber strongly reduces the water absorption by phenol formaldehyde resins, increases the resistance to water of the latter, and improves their physical and mechanical characteristic numbers considerably. The following impact- and vibration-resistant types exist:  $\Phi$ KN-1 (FKP-1),  $\Phi$ KN-2 (FKP-2),  $\Phi$ KNM-10(FKPM-10),  $\Phi$ KNM-15 (FKPM-15)

Card 3/3

	TATEVOS YAN, G.O.	
	Exhibition-review of consumer goods made of plastino.3:1-2 '61. (PlasticsExhibitions)	Cs. Plast. massy (MIRA 14:3)
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S/191/61/000/005/003/003 B124/B218

AUTHOR:

Tatevos'yan, G. O.

TITLE:

Exposition of the Achievements of the USSR Economy

PERIODICAL:

Plasticheskiye massy, no. 5, 1961, 72-75

TEXT: In the pavillon of the chemical industry of the above-mentioned exposition, fluorocarbon resins of the types • -4 (F-4) and • -3 (F-3) as well as many other new plastics of Soviet industry are shown. Polytetrafluoroethylene (ftoroplast-4) has a tan of 0.0002 and a dielectric constant of 2. During its use, temperature should not exceed 250°C. At 320°C, the material becomes transparent and plastic. Thermal decomposition starts at 450°C. At a stress of 30-50 kg/cm², a distinct residual deformation occurs, and at pressures of 200-250 kg/cm² the material goes over to the range of normal flow. The chemical and physico-mechanical properties of the material are specified, and cold pelleting of the powdery polymer at 300-350 kg/cm² and the fillers used for the purpose (mica, quartz powder, and asbestos fiber) are discussed. Products made of Card 1/41

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Exposition of the Achievements...

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Teflon possess high resistance to heat, high chemical stability, and high dielectric constants. This is illustrated by a description of the manufacturing process of a siphon and its use in a siphon-sealed pump. The siphon is a folded chamber which is used as a pipe for hermetic connections of interchangeable machine parts, as a feed pipe for controlled mechanisms (valves and flags), and as a sensitive elastic element in measuring instruments (pressure gauges etc.). The siphon must be made in a special mold, using an armature of metal and gypsum (Fig. 3). The main components of the mold are internal cylinder 4 and outer clamps 5. Ring-shaped polymer tablets are placed between them on external (2) and internal insert rings (3). The mold is compressed by screw clamps 6. The external metal or gypsum insert rings can be dismounted, while the internal insert rings are fixed. They are made of a low-melting alloy or gypsum. After the sintering of the tablets, the mold is opened, and the external and internal inserts are removed from the finished siphon 1; gypsum is removed by hot water, and the low-melting alloy with the help of a high-frequency generator. The siphon pump is used for pumping aggressive liquids. The piston function is performed by the siphon. Polymonochlorotrifluoroethylene (ftoroplast-3) differs from ftomoplast-4 by greater hardness and absence of cold flow.

Card 2/43

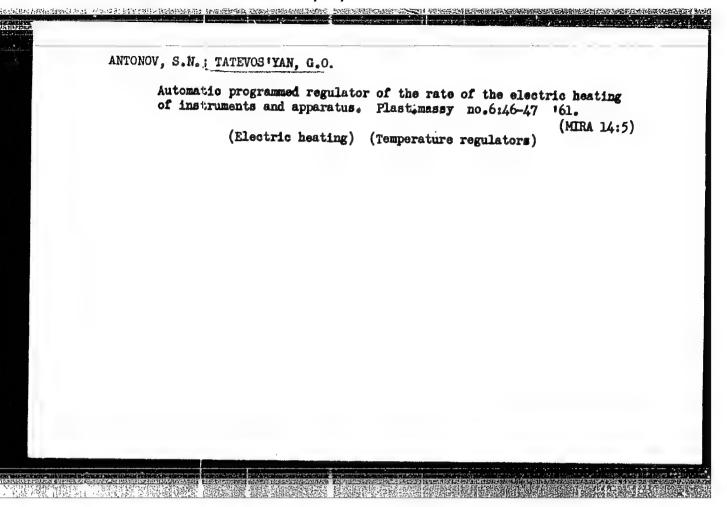
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Its dielectric properties, however, are worse, and its heat resistance in lower. It can be obtained by compression molding at about 220°C and 250-500 kg/cm². It is also suited for pressure casting and punching. Glass fibers, asbestos, graphite, quartz powder, etc. are used as mineral quartz-powder filler), kMk-218-A (kMk-218 (kMk-218) (with asbestos or filler), kMc-9 (kMS-9). (with glass-fiber filler), and k/k-9 (kFZh-9) (with glass-fiber filler), and k/k-9 (kFZh-9) (with powder of v-6 (of v-6) (on the basis of phenol exazolidine resins) and of vivatives with addition of powdery fillers). These phenol exazolidine molding powders differ from phenol formaldehyde molding powders by properties under long-time action of humidity and temperature. They were developed by K. D. Fetrov, Doctor of Technical Sciences, and his (Scientific Research Institute of Plastics). There are 5 figures.

Card 3/43



S/191/61/000/008/006/006 B110/B201

AUTHOR:

Tatevos'yan, G. O.

TITLE:

Exposition of achievements of the USSR national economy

PERIODICAL:

Plasticheskiye massy, no. 8, 1961. 69 - 75

TEXT: The plastics used in machine construction are required to have low specific gravity, a change of which is possible, good physicomechanical, thermal and sound-insulating, friction and antifriction, adhesion and sealing properties; in addition, they are required to be chemically stable as well as able to absorb vibrations. The liquid epoxy resins  $\frac{1}{2}$ -5(ED-5) and  $\frac{1}{2}$ -6(ED-6), as well as compounds of different trade-marks were on exhibit at the exposition. ED-5 is a bright-brown liquid, specific gravity 1.2 - 1.3, epoxy group content  $\frac{1}{2}$  20 %, volatile fractions  $\frac{1}{2}$  2.5 %, viscosity at 40°C (Hoeppler)  $\frac{1}{2}$  4,500 cp, neutral reaction. Its curing at 120°C with 10 % hexamethylene cyanamine content  $\frac{1}{2}$  10 min. ED-6 is a liquid with epoxy group content  $\frac{1}{2}$  16 %, volatile fractions  $\frac{1}{2}$  %, molecular weight 460 - 540. Both resist for a long time without changes in viscosity. As hardening agents serve: a) polyethylene polyamine, hexaethylene diamine at room Card  $\frac{1}{2}$ 

S/191/61/000/008/006/006 B110/B201

temperature (15 - 20°C); b) at 120 - 150°C; maleic anhydride, phthalic anhydride, dicyano diamine. >MC-5(EZh-5) compound, used in machine construction for removing castings faults, consists of ED-5 and iron dust as a filler. EO(BF) are alcoholic solutions of Resol-phenol-formaldehyde resins substituted with polyvinyl butyral. EO(-2) and EO(ABF) are used for glueing various metals, glass, plastics, leather. The adhesive power of duralumin to duralumin is at room temperature P(ABF) are used for glueing glass, glass fibers, and glass textolites. Adhesiveness to tissue P(ABF) and P(ABF) are used for glueing glass, glass fibers, and glass textolites. Adhesiveness to tissue P(ABF) and P(ABF) are used for glueing glass, glass fibers, and glass textolites. Adhesiveness to tissue P(ABF) and P(ABF) are used for glueing glass, glass fibers, and glass textolites. Adhesiveness to tissue P(ABF) are used for repairing filter cloths, bags, and clothing. Apart from these BF glues requiring warm curing, there are the following cold-setting glues: P(ABF) and P(ABF) and P(ABF) and P(ABF) are used for repairing filter cloths, bags, and clothing. Apart from these BF glues requiring warm curing, there are the following cold-setting glues: P(ABF) and P(ABF) are used for repairing filter cloths, bags, and clothing. Apart from these BF glues requiring warm curing, there are the following cold-setting glues: P(ABF) and P(ABF) are used for repairing filter cloths, bags, and clothing. Apart from these BF glues requiring warm curing, there are the following cold-setting glues: P(ABF) and P(ABF) are used for repairing filter cloths, bags, and clothing. Apart from these BF glues requiring warm curing, there are the following cold-setting glues: P(ABF) and P(ABF) are used for repairing filter cloths, bags, and clothing. Apart from these BF glues requiring warm curing, there are the following cold-setting glues: P(ABF) are used for glue and P(ABF) are used for glue and P(ABF) are used for glue

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150 - 200 kg/cm<sup>2</sup> and a rupture elongation between 350 and 450 %. Try-2(PU-2) is a 70 % solution of arhydrous PU-2 resin in arhydrous ethyl acetate. Its glueing is resistant to a protracted action of cold and warm water and may take place at rocm temperature and higher temperatures. On exhibit at the exposition stand "Chemical Industry" was the manufacturing technology of continuous and staple glass fibers, insulation of electric lines by means of glass fibers, glass tissue, fabric, and color combinations. The manufacture of continuous glass fibers is illustrated. The mass flows from feeders in a continuous jet, is cut to drops by blades and processes to glass beads of alkali-free aluminum borosilicate or calcium-sodium composition, melted in the electric furnace, and extruded to fibers by means of spinnerets. The fibers are coated with a paraffin emulsion, and the primary fiber (consisting of 100 - 200 individual fibers) is wound around a bobbin. The following glass fibers are used by the plastics industry: Ropes nade of beams of continuous plaits as a filler. Twined thread for weaving with 22 - 16 textures. Diameter of individual fibers: 6 + 1µ, breaking strength: 500 - 4,800 g, twisting per m: 100 + 10; 150  $\pm$  15; 200  $\pm$  20; oil content  $\leq$  3.0 %. It serves for glass tissue, glass band manufacture, etc. Glass textolites are manufactured with glass Card 3/7

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tissues of trade-marks  $A((as): T_1(T_1), T_2(T_2), A(T(6)-8, (astr (b)-8); A(T(6)-9 (astr (b)-9); A(T(6)-(astr (b)-s_1) (satin); A(T(6)-(-2 (astr (b) s-2) with the square-meter weights: 105, 285, 285, 425, 320, and 400 g. Their thread count per cm 12 - 38 m on the warp, and 7 - 18 on the weft. The breaking load of a 25 by 100 mm large strip is, on the warp, 35 - 250 kg, and, on the weft, 35 - 150 kg. Oil content <math>\leq 2.5 \%$ . The following fabric nets serve for manufacturing glass textolites for electrical insulation: C(T)-6(sste-6) and C(T)-9(sste-9). The square-meter weight is 190 - 240 g, thread count per cm: on the warp = 10, on the weft = 9, breaking load of a 25 by 100 mm large strip on the warp  $\geqslant 110$  kg, on the weft  $\geqslant 100$  kg, oil content  $\leq 2.6 \%$ . The glass fabric nets intended for radiotechnical glass textolites:  $P(1-1(Rs_1-1); P(1-2(Rs_1-2); P(1-3(Rs_1-3)); P(2-2(Rs_2-2); P(2-3(Rs_2-3)); P(2-3(Rs_2-3)); P(3-3(Rs_1-3)); P(3-3(R$ 

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synthetics suited for the manufacture of plastics with glass fiber fillers were on exhibit: cold setting, liquid epoxy resins ED-5 and ED-6, polyester resin TH-1(PN-1) with HK(NK) accelerator (8 % cobalt naphthenate solution in styrene) for its cold setting, substituted epoxy-organosilicon resins, unsaturated polyester resins, lacquer QM-1(FL-1); glue BF-2 phenolformal-dehyde resins modified with polyvinyl acetate. Liquid resin is sucked through the glass fiber filler placed in a form. It is molded by means of vacuum pockets, higher pressure, and a rubber bag, or small glass fiber-, resin-, and hardener pieces are blown in. Washing basins and kitchen sinks, tanks, the panel of MA3-500(MAZ-500), and bus seats of glass textolite, as well as a blowing device for large structural and machine parts were also on exhibit. The blowing device is fastened to a rotary suspension by a rope; it features two handles and a glass fiber cutter. The capacity is

23 - 13 m<sup>2</sup>/hr for a thickness of 1.5 - 3 mm, a resin consumption of 24 - 60 kg/hr, and a glass fiber consumption by feeding a thread = 34 kg/hr, length of cut fiber: 20, 40, and 60 mm. The dimensions of the system in working position without apparatus are: 2.750 by 800 by 2.350 mm; those of the apparatus are 430 by 300 by 240 mm; their weight (without apparatus) is: 236.8 kg. The body of a mine truck, consisting of thread positions in Card 5/7

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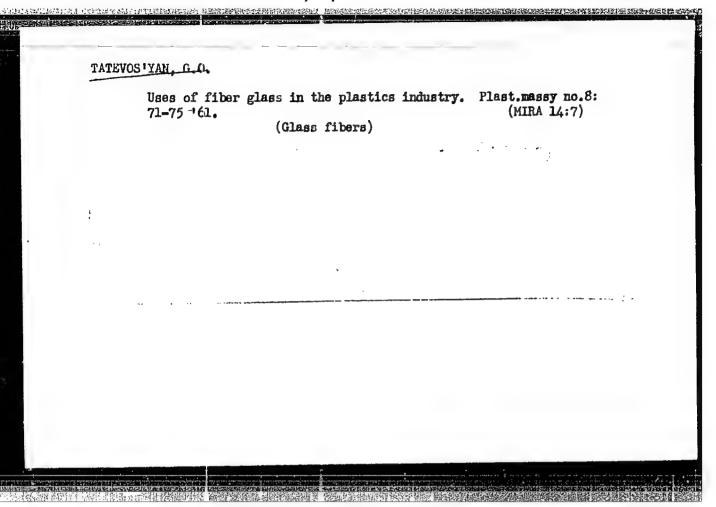
various directions and of polyester resin, weighs only 76 kg (metallic: 190 kg), and its service life is 1.5 times longer. The system YT-1(UT-1) of the Khar'kovskiy gornyy institut (Khar'kov Mining Institute) serves for the continuous manufacture of 80 and 100 mm polyester pipes and glass cords. The pipes are linked by tapered couplings and contain 55 - 60 vol % glass fibers. The tensile strength is longitudinally 2,000 kg/cm², transversally 4,000 kg/cm². A 100-mm pipe with a 4.3-mm wall thickness withstands 200 At hydrostatic pressure and 100 At gas pressure in 24 hr. Exhibits included:

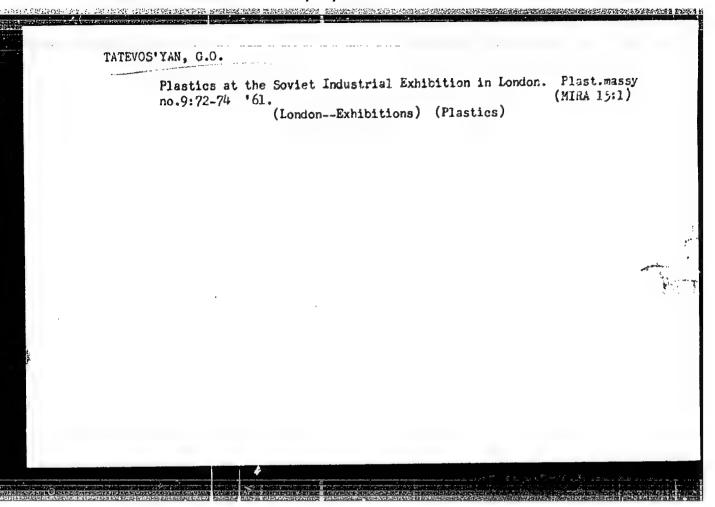
hydrostatic pressure and 100 At gas pressure in 24 hr. Exhibits included: glass textolites for electrical insulation and construction, initial glass fibers, and variegated glass slates roofing and paneling. Its specific gravity is 1.6 - 2.2 g/cm<sup>2</sup>, bending strength 700 - 2.400 kg/cm<sup>2</sup>, water

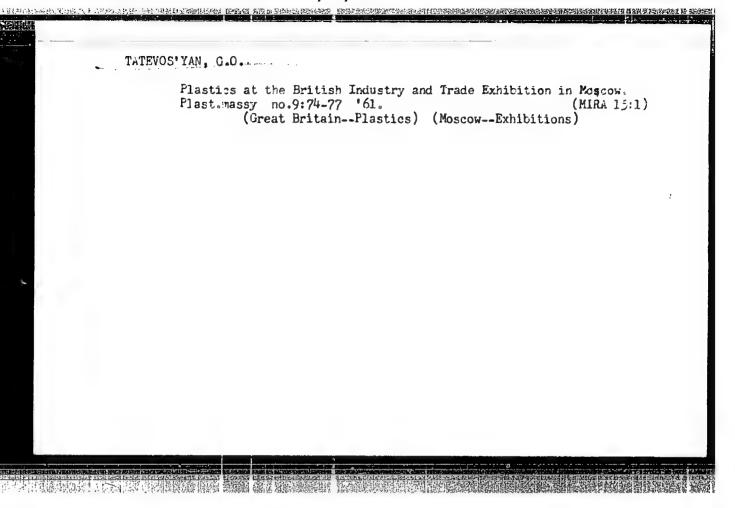
absorption 0.3%, resistance to cold  $-60^{\circ}$ C, heat resistance  $80^{\circ}$ C. A graph illustrated its manufacture by means of an  $\Phi$ CM(FSP) unit. Electrotechnical and  $A\Gamma$ -4(AG-4) structural parts are hydraulically pressed. [Abstracter's note: The seven photographs are not reproducible.] There are 8 figures.

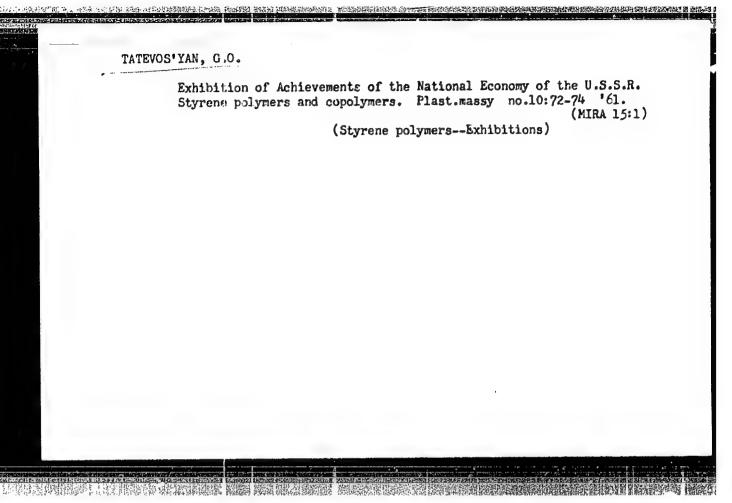
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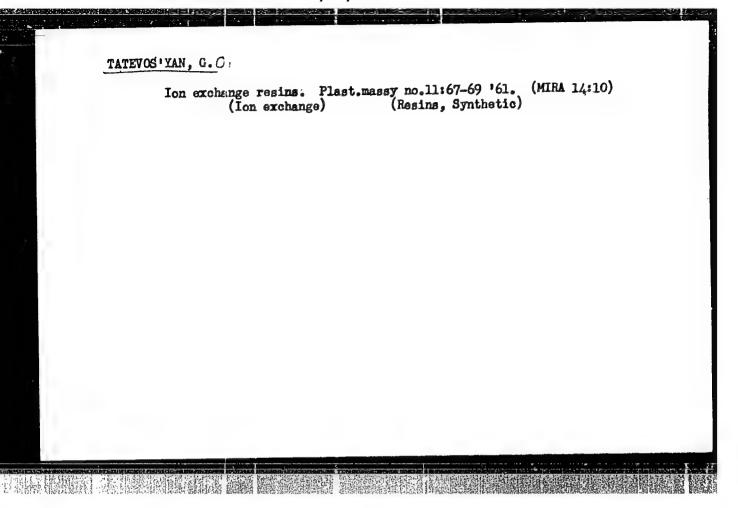


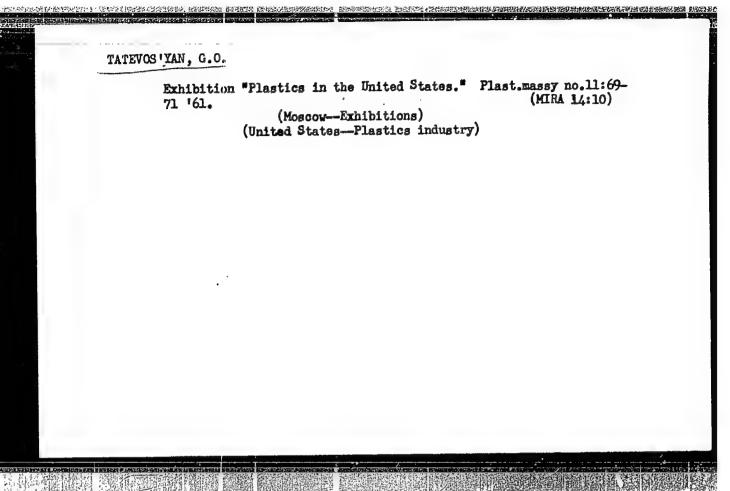


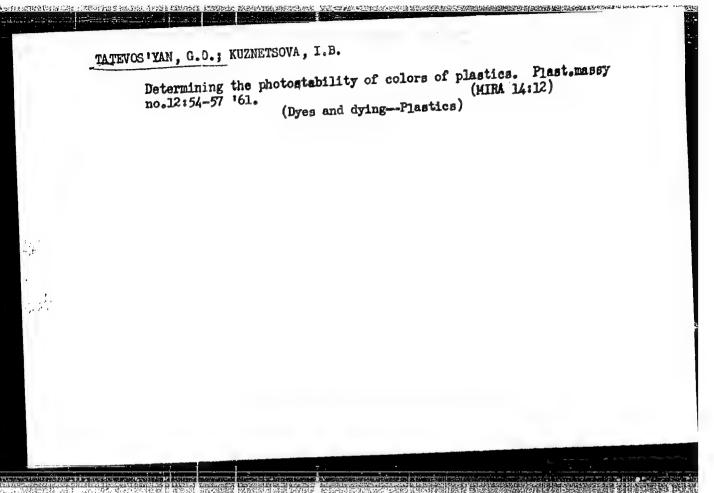
ANTONOV, S.N.; TATEVOS'YAN, G.O.

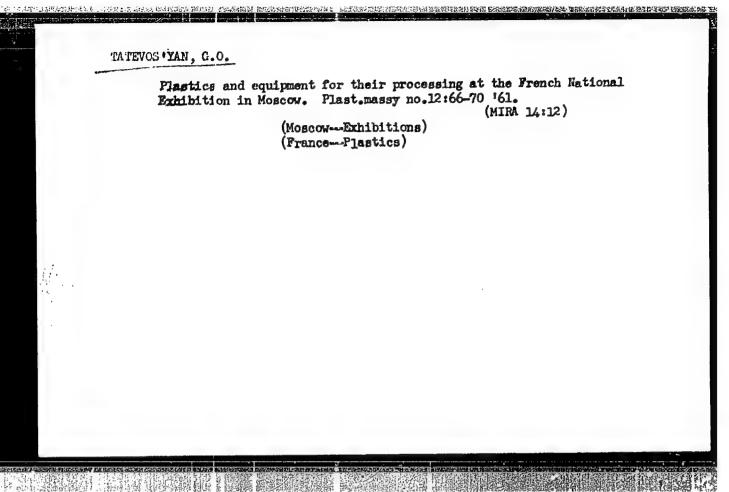
Circuit diagram of a setup for determining specific volumetric and surface electric resistances. Plast.massy no.11:55-57 '61. (MIRA 14:10)

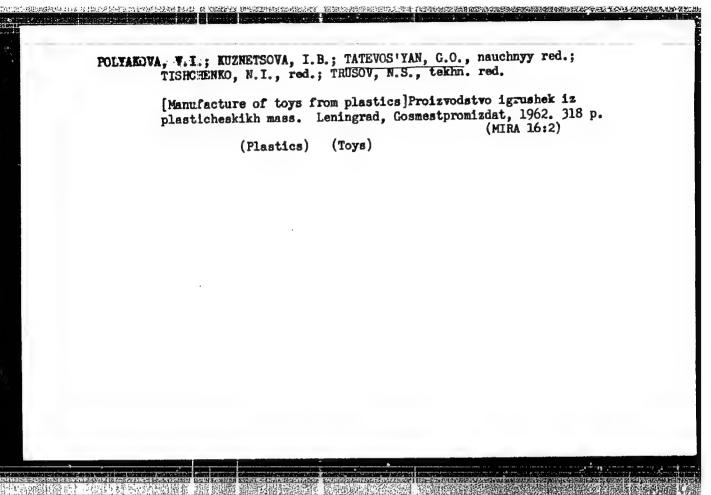
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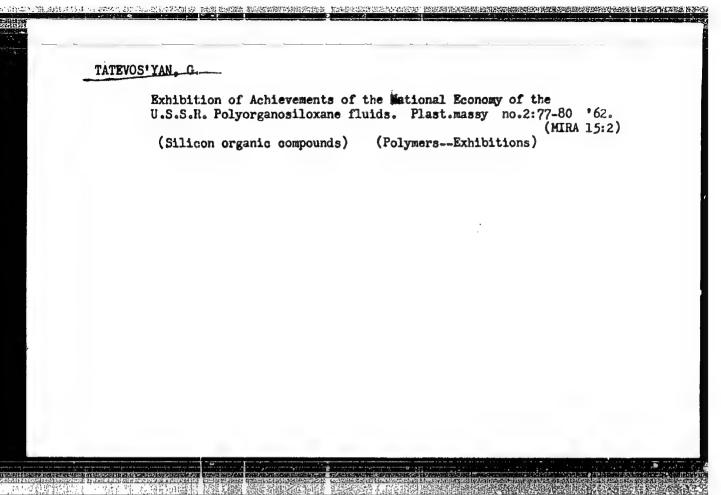












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AUTHOR:

Catevos ven. G. O.

TITLE:

Exposition of Achievements of USSR National Economy,

Scientific papers on polymer materials

PERIODICAL:

Plasticheskiye massy, no. 3, 1962, 1-2

TEXT: Investigation results on polymer materials obtained by institutes of the AS USSR and the Nauchno-issledovatel skiy institut plasticheskikh mass Goskomiteta po khimii Soveta Ministrov SSSR (Scientific Research Institute of Plastics of the State Committee on Chemistry of the Council of Ministers USSR) (NIIPM) are exhibited in the pavilions of the AS USSR and the chemical industry of the Vystavka dostizheniy narodnogo khozyaystva SSSR (Exposition of Achievements of USSR National Economy). New polymers shown are polyarylates (PA) obtained from bivalent phenols and dicarboxylic acids. PA may be worked into films and fibers. The films show good strength, high dielectric characteristics, and high heat resistance (300°C and more). Two procedures for producing PA (80-90% yield): were developed at the laboratoriya vysokomolekulyarnykh soyedineniy

Card 1/4

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Instituta elementoorganicheskikh soyedineniy AN SSSR (Laboratory of Highmolecular Compounds of the Institute of Elemental Organic Compounds AS USER) (a) polycondensation of dicarboxylic chlorides with bivalent phenols at 100-240°C in high-boiling solvent and N2 stream; (b) polycondensation at the organic solvent - HoO interface. The reaction takes only minutes. Systematic investigations of organosilicon-tin and organotin compounds are conducted at the laboratoriya vinilovykh soyedineniy Instituta organicheskoy khimii AN SSSR (Laboratory of Vinyl Compounds of the Institute of Organic Chemistry AS USSR). Organotin compounds can be used as stabilizers for polyvinyl chloride, insecticides, and mildew protectives. Procedures for producing polymers and copolymers from trialkyl stannyl methacrylate and dialkyl stannylene dimethacrylate were developed at the IOKh AN SSSR and NIIPM GKKh SM SSSR. Triethyl stannyl methacrylate with methyl methacrylate (ratio 1:1) gives a copolymer with a softening point of 180-200°C and a mechanical strength equal to that of usual organic glass. It is stable to H2O and acetic acid, and screens off X-rays. Dibutyl stannylene dimethacrylate + methyl methacrylate has a softening point > 200°C. Both copolymers can be pressed into transparent products. Reactions between silicon compounds and compounds containing Al, Ti, B, Sn, Card 2/4

Exposition of Achievements ...

S/191/62/000/003/001/010 B101/B147

etc. are studied at the Institute of Elemental Organic Compounds AS USSR. Synthesis methods were developed for compounds of the type  $(-Si-O-X-O-)_n$ , where X = Al, Ti, B, Cr, Ni. The structure of these compounds is similar to that of silicates. Polymers with structures of Al-O-Al, Ti-O-Ti, were also synthesized, the free valencies, being saturated with  $(CH_3)_3Si-O-$ 

groups. Plastics, enamels, and varnishes stable from -60 to +550°C were obtained. The reaction of glycols or multivalent alcohols with unsaturated monobasic and dibasic acids of the acryl series yielded polyester acrylates (PEA) which were converted quickly and with slight volume changes into infusible and unsoluble polymers of steric structure at room temperature or a little above, without formation of volatile by-products. PEA may copolymerize with each other, with all unsaturated monomers, and with most synthetic high-molecular compounds. Depending on the initial substances, glassy or rubberlike polymers are obtained. They show high strength, heat resistance, stability, to dynamic and static loads, good adhesion to fibrous fillers, and high electrical insulating properties. The PEA types MAQ-2 (MDF-2), MAQ-4 (MDF-4), and others, were developed at the Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AS USSR). They are cheaper than former industrial products. Glass-reinforced plastics on Card 3/4

Exposition of Achievements ...

S/191/62/000/003/001/010 B101/B147

PEA basis have small weight. Since electroinsulating varnishes made of PEA contain no solvent, impregnating and drying of electrical windings is greatly accelerated. Universal glues were developed on PEA basis. The following procedures were worked out at the Institute of Chemical Physics AS USSR basing on the theory of degenerately ramified chain reactions of the oxidation of low-molecular hydrocarbons by Academician N. N. Semenov, Nobel prize winner: (1) production of formaldehyde by direct oxidation of natural gas methane by means of atmospheric oxygen (IFKh AN SSSR together with VNIIGaza); (2) oxidation of butane to acetic acid and methyl ethyl ketone in liquid phase near the critical temperature. Oxidation proceed almost quantitatively. Compounds of the thiophene series which can be used as vulcanization accelerators and antiaging additives of rubber were synthesized at the Institut organicheskoy khimii im. N. D. Zelinskogo AN SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy AS USSR). Sulfurous petroleum from the Volga region and the Ural, as well as oil shales from the Volga region, can be used as sources for these compounds.

Card 4/4

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15.8500 (also 2209)

AUTHORS: Tatevos van G. O.

Tatevos van. G. O., Kuznetsova, I. B.

TITLE:

Problem of weather resistant film materials

PERIODICAL: Plas

Plasticheskiye massy, no. 3, 1962, 44.- 51

TEXT: Films made of polyethylene (PE), polyvinyl chloride (PVC) plasticized with a BCD (VSF) plasticizer, or PVC type 230 were exposed to atmospheric influences or to the radiation of arc lamps or mercury-quartz lamps. Aging was tested by measuring the tensile strength of  $(k_E/cm^2)$  and the relative elongation E(%) at the moment of breaking. For PE, graphs of versus  $\tau$ , and E versus  $\tau$ , where  $\tau$  = time, were plotted, and aging was assumed to end when E reached 50% ( $\tau_{50}$ ). For PVC, aging was assumed to end with the occurrence of brittle fracture, when bent 180° at room temperature (FOCT 5960-51, GCST 5960-51). Results: (1) Under atmospheric influences, aging of PE was 70% faster in Fergana than it was in Moscow ( $\tau_{50}$  in Moscow 160 days). (2) In the laboratory, aging in arc light yielded comparable results. A conversion factor K = solar radiation

Card 1/3

 Problem of weather resistant ...

Card 2/3

S/191/62/000/003/007/010 B101/B147

hours/laboratory light hours = approximately 3.0 was found. The ratio TMoscow, days/Tlight hrs was 0.737, Tergana, days/Tlight hrs was 0.421.

(3) No comparable results were obtained with Hg lamps which cannot be used for age tests since the processes are completely different. (4) A 1.5% addition of carbon black to PE increases its light resistance: without carbon black & dropped from 400 to 50% after 300 hrs, with carbon black it dropped from 533 to 7.5%. (5) Reinforcement of PE with cotton fabric (percale type A(A)) --- increased its service life:

To = 600 hrs. (6) Stabilizer additions to PE showed the following: with 2-hydroxy-4-octyl benzophenone: To = 252 in Moscow; with phenol 
styrene combination: To = 338 in Moscow. (7) In PVC stabilized with lead silicate, brittle fracture occurred after 367 hrs in arc light.

(8) Service life was increased to 954 hrs by lead stearate + 3A-5 (ED-5) epoxy resin owing to synorgism. (9) Effect of stabilizers: PVC 230 had To = 1727.5 hrs without stabilizer. Addition of diphenylol propane or 1,1-bis-(4-hydroxy-phenyl)-cyclohexane gave To = 2162. 2,2'-4,4'-tetra-

Problem of weather resistant ...

S/191/62/000/003/007/010
B101/B147

hydroxy sebacephenone (\tau\_{100} = 2350 hrs), 2,2'-4,4'-tetrahydroxy
adipophenone (\tau\_{100} = 2459 hrs), and 2,2-bis-(3-methyl-4-hydroxy-phenyl)
propane (\tau\_{100} = 2715 hrs) had the best effects. Z. V. Popova, Ye. N.
Matveyeva, and A. S. Danyushevskiy prepared the specimens. There are
8 figures, 3 tables, and 5 Soviet references.

S/191/62/000/004/001/017 B110/B138

AUTHORS:

Igonin, L. A., Ratner, S. B., Tatevos'yan, G. O.

TITLE:

Improved methods of testing plastics

PERIODICAL:

Plasticheskiye massy, no. 4, 1962, 1-2

TEXT: With the aim of standardizing methods of testing plastics, the pervoye mezhvedomstvennoye rabocheye soveshchaniye po metodam ispytaniy plastmass (First Interdepartmental Working Conference on Methods of Testing Plastics) was held in Moscow in 1961 with 480 representatives from 179 organizations. V. A. Kargin, G. M. Bartenev, L. A. Igonin, Yu. M. Malinskiy, D. F. Kagan, S. A. Reytlinger, and A. D. Sokolov reported on the current situation. Then the following were discussed: (a) mechanical properties, (b) technological properties, (c) aging and chemical stability, (d) physical and chemical properties, (e) dielectric properties, (f) chemical and analytical methods, (g) technical requirements. Seven permanent working groups have been formed to study (a); four of them are on the standardization of mechanical tests (static, dynamic properties, friction and wear, heat and frost resistance), and

Card 1/4

Improved methods of testing ...

S/191/62/000/004/001/017 B110/B138

three of them on the mechanical properties of foam and porous plastics, glued joints and microspecimens. Three permanent groups are studying (b); methods of resting thermoreactive materials, rheological characteristics of thermoplastics, and thermophysical properties. Three temporary groups are studying (c); chemical, thermal, optical, atmospheric, and biological stability, and migration of plasticizers. Temporary groups are studying (d); molecular weight determination, viscosity of solutions, gas and moi: ture permembility of films, etc. Permanent groups are studying (e). Temporary groups are studying (f); spectral analysis, analysis of aldehydes in mixed polyvinyl acetals, electrometric determination of monomers in polymers and copolymers, determination of Cl in organosiloxanes, etc. One group is studying (g); technical requirements for resol and novolak resins, powder bakelite, phenol formaldehyde plastics, laminated plastics, aminoplasts, PVC, polystyrene and its copolymers. polyethylene, production and conditioning of samples. A permanent working commission for methods of testing plastics which is to be established within the Sovet po sinteticheskim materialam na osnove vysokomolekulyarnykh sovedineniy pri Goskomitete Soveta Ministrov SSSR po koordinatsii nauchno-issledovatel'skikh rabot (Council for Synthetic Materials Based on

Card 2/4

Improved methods of testing ...

S/191/62/000/004/001/017 B110/B138

High-molecular Compounds at the Goskomitet of the Council of Ministers USSR for the Coordination of Scientific Research) will: (1) exchange experience on test methods, (2) coordinate scientific work, (3) standardize tests, (4) recommend testing apparatus for series production. (5) check proposals made by the MCO(TK-61) (ISO(TK-61)). It will consist of the following working groups: RG-1 - terminology and definitions, RG-2 - mechanical properties, RG-3/7 production and standardization of specimens, RG-4 for technological and thermal properties, RG-5a for physical and chemical properties, RG-5b for analytical methods, RG-6 for aging and chemical stability, RG-8 for dielectric properties, RG-9 for technical requirements, RG-10 for cellular materials. Standardization will provide for: (1) production processes, (2) good design of plants for processing, (3) reliable quality guides for industrial production, (4) engineering characteristics, (5) appropriate research for developing new materials. The Romissiya po mekhanike polimerov Goskhimkomiteta (the Goskhimkomitet Commission for Polymer Mechanics) has worked out five complex mechanical and technological characteristics for some polymers. State standards are to be published in the near future. Two interdepartmental commissions will be established for testing plastic Card 3/4

Improved methods of testing...

S/191/62/000/004/001/017
B110/B138

tubes and polymer films. The production of apparatus and the training of laboratory staff will be intensified.

S/191/62/000/005/002/012 B110/B101

AUTHORS:

Popova, Z. V., Yanovskiy, D. M., Tatevos'yan, G. O.,

Shtelker, O. A.

TITLE:

The effect of polyvinyl chloride decomposition inhibitors

on the decomposition kinetics and light-fastness of poly-

vinyl chloride plasticate

PERIODICAL:

Plasticheskiye massy, no. 5, 1962, 3-6

TEXT: Attempts were made to increase the stability of PVC by adding the following inhibitors which do not bind HCl: (1) phenols, (2) aromatic hydroxy ketones, (3) products of the autocondensation of cyclohexanone, and (4) esters of benzoic and salicylic acid. The following substances were investigated: 2,4-dihydroxy benzophenone (I), 2-hydroxy-4-methoxy benzophenone (II), diphenylol propane (III), 2,2-bis-(3-methyl-4-hydroxy-phenyl)-propane (IV), 1,1-bis-(4-hydroxy phenyl)-cyclohexane (V), 2,2',4,4'-tetrahydroxy adipyl phenone (VI), 2,2',4,4'-tetrahydroxy sebacyl phenone (VII), dodecahydrotriphenylene (VIII), the product from the autocondensation of three molecules cyclohexanone (IX), the product from the autoconden-

Card 1/3

s/191/62/000/005/002/012 B110/B101

The effect of polyvinyl chloride ...

sation of six-molecules cyclohexanone (X), resorcin dibenzoate (XI), resorcin disalicylate (XII), phenyl salicylate (XIII), and β-naphthoxy propene oxide (XIV). The effect of these substances on the stability of powders and plasticized films was determined: (1) according to the decrease of heat resistance of PVC after ultraviolet irradiation, (2) by comparing the rate of separation of HCl during heating of stabilized and nonstabilized PVC before and after ultraviolet irradiation. A measure of the aging stability was afforded by the length of time elapsing before brittleness appeared in the 180° bending test, as well as by the time of irradiation at which the rupture elongation dropped by 50%. IX, X and XIV delayed dehydrochlorination effectively, VI and VII only slightly: concentrations: IX = 0.064, X = 1.130, XIV = 0.050, VI = 0.082, VII = 0.096 g per 10 g PVC; setting in of decomposition: IX =  $150^{\circ}$ C,  $X = 158^{\circ}C$ ,  $XIV = 169^{\circ}C$ ,  $VI = 154^{\circ}C$ ,  $VII = 157^{\circ}C$ ; separated amount of HCl before irradiation (mg HCl/g PVC): IX = 1.94, X = 1.88, XIV = 1.70, VI = 3.40, VII = 3.57; after irradiation: IX = 4.88, X = 4.87, XIV = 4.75, VI = 5.85, VII = 6.50. For a plasticate containing 12 parts by weight of lead silicate and 0.5 parts by weight of an inhibitor mixture, the best heat resistance and fastness to light was found to occur using cyclohexanone stabilizers VIII, IX and X. In this case it was VI, VII and XIV Card 2/3

The effect of polyvinyl chloride ...

S/191/62/000/005/002/012 B110/B101

that produced the lowest fastness to light (TPK-2 (PRK-2) lamps). For aging of plasticates under arc lamp light, III, IV, V, VI and VII gave best results, XI, XII and XIII the poorest. There are 4 tables.

Card 3/3

36903 \$/191/62/000/005/012/012 B110/B101

15.2000

AUTHOR:

Tatevos'yan, G. O.

TITLE:

Exposition of achievements of national economy. New

studies in the field of polymeric materials

PERIODICAL:

Plasticheskiye massy, no. 5, 1962, 75-78

TEXT: The VNII NEFTEKHIM jointly with the Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High Molecular Compounds AS USSR) and the Nauchno-issledovatel'skiy institut plastmass (Scientific Research Institute for Plastics) developed a new thermoplastic, high-molecular

polyether "Pentaplast", of 1.4 g/cm<sup>3</sup> density, by chlorination of pentaerythrite. This polyether has the following properties: static bending strength limit 500-700 kgf/cm<sup>2</sup>, specific resilience 35-40 kgf·cm/cm<sup>2</sup>, volume resistivity 4·10<sup>16</sup> ohm·cm, tangent of the angle

of dielectric losses at 10<sup>6</sup> cps 11·10<sup>-3</sup>, dielectric constant at 10<sup>6</sup> cps 2.8, breakdown voltage 35 kv/mm, heat resistance according to Vicat

Card 1/4

Exposition of achievements of ...

S/191/62/000/005/012/012 B110/B101

160-170°C, water absorption in 24 hrs at 20°C 0.02%. It can be used for precision instruments and corrosion-proof chemical apparatus. It may be cast under pressure at 190-240°C, extruded at 220-240°C and pressed at 170-210°C and 150 kgf/cm². At the NIIPP, methyl methacrylate of the ЛПТ (LPT) brand with 90,000-120,000 molecular weight and heat resistance up to 95°C (Martens), was synthesized. It can be cast at 190-235°C and \$\grapsize 1200 \kappagrapsize kgf/cm², extruded at 170-200°C, and pressed for 5-10 min at 180-200°C and 200-300 kgf/cm². The data are: density 1.18-1.2 g/cm³; specific resilience of pressed samples 12-19 and of cast samples 16-27 kgf·cm/cm², static bending strength limit 1200-1800 kgf/cm², Brinell hardness 17-18 kgf/cm², heat resistance according to Vicat 120-125°C, flow according to Raschig at 200°C and 600 kgf/cm² 30-60 mm/sec. At the Institute of High Molecular Compounds AS USSR, thixotropic gels were synthesized from aqueous solutions of highly viscous polyvinyl alcohol, and of iodine salts. They contain mobile bonds between neighboring chains, which decompose during heating and

Card 2/4

Exposition of achievements of ...

S/191/62/000/005/012/012 B110/B101

are restored at a certain temperature. Their medical importance, especially for curing tuberculosis, was established in collaboration with the Leningradskiy institut tuberkuleza (Leningrad Institute of Tuberculosis). At the Institut organicheskoy khimii im. N. D. Zelinskogo AN .SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy AS USSR), a universal method for the preparation of vinyl ethers from undiluted acetylene and alcohols in the presence of alkali was developed on the basis of the Favorskiy-Shostakovskiy reaction. On this basis, a continuous process for the preparation of acetaldehyde (92% yield) by hydrolysis of vinyl isoamyl ether was worked out. The Institut goryuchikh iskopayemykh AN SSSR (Institute of Mineral Fuels AS USSR) proposed to perfect the cumene method for the preparation of phenol by catalytic decomposition of the phenol resin formed. The Arkhangel'skiy lesotekhnicheskiy institut (Arkhangel'sk Forestry-engineering Institute) together with the NIIPlastmass etc. developed the production of ligninpowder bakelite, 50% of crystalline phenol having been replaced by alkaline lignin sulfate. Lignin as chemical raw material can also be used for producing cheap binding agents for wood fiber materials.

Card 3/4

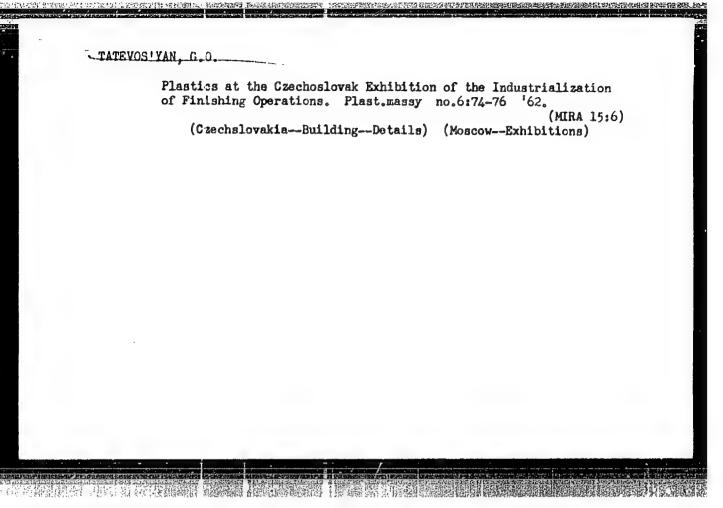
 Exposition of achievements of ...

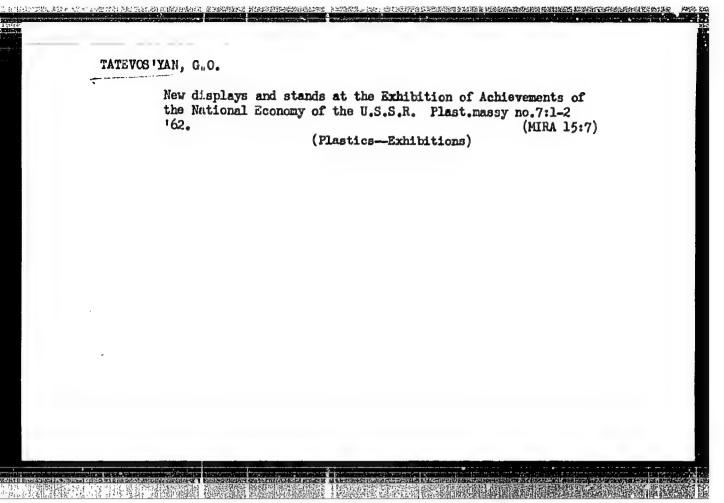
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These binding agents are produced by condensation of industrial lignins with aldehydes and phenols in alkaline medium. They adhere well to wood, are completely water-soluble, polymerize well at 150-160°C under formation of water-resistant polymerizates. Fiber board produced from them was pressed at 140°C and 18-20 kgf/cm $^2$  with 10% resin. Plates pressed at 150-160°C had a static bending strength limit of 250 kgf/cm $^2$ .

Water absorption did not increase above 70 g/m<sup>3</sup> after 24 hrs, swelling was 6.5%. The new lignin resins cost only 1/6 as much as those made from crystalline phenol, 1/4 to 1/3 times as much as the carbamide resin M $\phi$ -17 (MF-17). There are 2 figures and 2 tables.

Card 4/4





S/191/62/000/007/011/011 B124/B144

AUTHOR:

Tatevos'yan, G. O.

TITLE:

Exposition of the Achievements of USSR National Economy.

Instruments and apparatus for testing polymers

PERIODICAL:

Plasticheskiye massy, no. 7, 1962, 71-74

TEXT: (1) Apparatus ATT-2 (EFP-2) for preparative electrophoretic isolation of proteins, anino and nucleic acids, various inorganic compounds, etc., developed by the SK3 BFEM Mosgorsovnarkhoza (SKB BFEM of the Mosgorsovnarkhoz). (2) Paper electrophoresis apparatus for isolation and subsequent determination of proteins and other high-molecular compounds, developed by the SK3 BFEM of the Mosgorsovnarkhoz. This is suited for the simultaneous determination of five preparations on paper tape 40 mm wide and 400 mm long. Using a densitograph with integrator and analysis takes 3-5 min. (3) Ultrasonic viscosimeter BHA-61 (VND-61) developed by the NIIPM for continuously measuring the viscosity of liquid and dissolved polymers, impregnating masses, molten asphalts, varnishes, glues, lubricants, liquid fuels, petroleum products, etc. The instrument consists Card 1/2

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Exposition of the Achievements ...

S/191/62/000/007/011/011 B124/B144

of an immersion pickup (diameter 14 mm), an electronic block, and a junction cable. The error of measurement is 5%, the working temperature up to 200°C. (4) Recording device for testing internal stresses and adhesion properties of plastic coats, developed by the Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry AS USSR). The stresses which cause a detachment of the film from the support are taken as a measure of adhesion. The measuring principle is based on photoelasticity. (5) Unideveloped at the Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AS USSR) for liquid monomers and oligomers (irrespective of the structure of the resulting polymers) on the basis of the polymerization heat of measuring cells one of which works with less delay, the other with greater delay but easier handling. There are 4 figures.

Card 2/2

s/191/62/000/008/013/013 B124/B180

AUTHOR:

Tatevos yan, G. O.

TITLE:

Exhibition of Achievements of the USSR National Economy.

Instrumentation

PERIODICAL:

Plastiqheskiye massy, no. 8, 1962, 76-78

TEXT: The following exhibits in the "Mashinostroyeniye" ("Machine Building") Pavilion are described in detail: (1) Devices for the central automatic control of operation parameters for the chemical, petroleumrefining, rubber, etc. industries, Зенит-1 (Zenit-1) and Зенит-2 (Zenit-2); (2) electronic level indicator 3CV-1 (ESU-1); (3) radioactive analyzer PAX-1 (RAZh-1) for indicating and recording the concentration and their densities of one or both components in binary liquid mixtures, and (4)  $C\Gamma\Gamma$ -2 (SGG-2) for indicating combustible gases in the air.

Card 1/1

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S/191/62/000/009/011/012 B101/B144

AUTHORS:

Antropova, N. I., Kuznetsova, I. B., Tatevos'yan, G. O.,

Sharova, A. V.

TITLE:

Surface treatment of the TK-4 (PK-4) film with stabilizing

substances

PERICOICAL: Plasticheskiye massy, no. 9, 1962, 61 - 64

TEXT: In order to stabilize the PK-4 polycaproamide film used in agriculture it was treated with potassium iodide, manganese chloride, copper sulfate, potassium bichromate,  $\beta$ -naphthol, benzophenone, resorcinol disalicylate, resorcinol dibenzoate, formalin, or tannin. The changes in the tensile strength  $\sigma$  and breaking elongation  $\epsilon$  were tested after artificial aging by ultraviolet (Hg lamps) or arc light, or after natural aging under atmospheric conditions in Moscow or Fergana. Potassium iodide,  $\beta$ -naphthol, benzophenone, potassium bichromate, and tannin. showed a slight stabilizing effect against ultraviolet irradiation. The data got by irradiation with arc lamps were better comparable with those obtained by aging under atmospheric conditions than the data from Card 1/2

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Surface treatment of the ...

S/191/62/000/009/011/012 B101/B144

ultraviolet irradiation. For 6, measured along the nonstabilized film and along the film stabilized by tannin, the following data were obtained respectively: nonirradiated 371, 452 kg/cm², after 50 hr irradiation 393, 677; after 120 hr 500, 630; after 140 hr 316, 366 kg/cm². The durability of films exposed to atmospheric effects was 3 months in Moscow and 2 months in Fergana. Treatment with 1% tannin solution reduced the thermonidative destruction of the film at 200°C to 1/7 as compared with untreated film. Untreated film contained 11.7% products soluble in water, that treated with tannin only 3.3%. Treatment with tannin changes the optical properties of the PK-4 film. The maximum of light absorption, which is 250-310 mm for untreated film, shifts towards 280-400 mm. The useful life of the film is slightly increased by treatment with tannin and this also renders the film more frost-resistant. There are 2 figures and 4 tables.

Card 2/2